Grain Food Plots for Wildlife

CONSERVATION MANAGEMENT SHEET - BIOLOGY SERIES 645

Natural Resources Conservation Service

Michigan

Grain food plot on Conservation Reserve Program (CRP) land

What is a Grain Food Plot?

A grain food plot for wildlife is an annual planting of grains to provide winter food for deer, rabbits, pheasants, and many other species on rural land.

How a Grain Food Plot Works

A grain food plot offers wildlife a place to forage for food in late fall, winter and early spring after field crops are harvested. It is left standing over winter to encourage wildlife use. When established on CRP land, it complements the grass cover already present. And because of increasing wildlife populations using CRP land, it is an important land management feature to attract and feed pheasants, deer, rabbits, quail, squirrels, songbirds, etc. during the winter.

Where a Grain Food Plot Applies

A wildlife food plot applied to rural landscapes will add plant diversity, food, and cover. It also should be considered for use where CRP (Conservation Reserve Program) land is planned to provide a winter food source. Where fall plowing buries most of the crop residue cover, food plots, planted downwind to wood lots, fence rows, idle land, switchgrass cover, or winter cover such as cattail swales, are an excellent choice to encourage wildlife survival.

Where to Get More Assistance

Additional local assistance may be obtained from the local office of a Michigan Conservation District or the USDA Natural Resources Conservation Service (NRCS) office at:_____
_____
_____
_____

Design Criteria Date _____

Assisted by: _____

Project location and information

Client Name: _____
County: _____
Township: _____
Section: _____
Farm Name: _____
Field Number : _____

Recommended Wildlife Food and Rates

Food	*Rate (lb./ac)*
1. *Corn*	*10*
2. *Sunflowers (oil varieties)*	*10*
3. *Grain Sorghums (early maturing)*	*10*
4. *Soybeans*	*30-45*
5. *Millet (grain, i.e., Japanese)*	*12-15*
6. *Spring barley*	*48*
7. *Buckwheat*	*50*
8. *Forage sorghums and Sudan grass hybrids (early maturing)*	*10*

Recommended Planting Seed Depth

Food	*Seed Depth (inches)*
1. *Corn*	*1 1/2-2*
2. *Sunflowers (oil varieties)*	*1-2*
3. *Grain Sorghums (early maturing)*	*1-1 1/2*
4. *Soybeans*	*1/2-1*
5. *Millet (grain, i.e., Japanese)*	*1/2-1*
6. *Spring barley*	*1-2*
7. *Buckwheat*	*1-2*
8. *Forage sorghums and Sudan grass hybrids (early maturing)*	*1-2*

Seed size, soil texture, moisture, and temperature affect planting depth. Crops planted in dry, coarse-textured (sandy) soils may require deeper planting. Soils that are cold, fine-textured (clay) and/or wet may require shallower planting. *Seeds of forage crops are very small and can emerge only from shallow depth, generally less than 1/2 inch. Therefore, take extreme care with planting depth. A level seedbed is a must to get a good stand.* Cultipacker seeders and band seeders followed by press wheels or a cultipacker help ensure shallow seed placement. Check sod seed drills carefully for seed depth.

Recommended Planting Dates

Food	*Planting Date*
1. *Corn*	*April 20-May 25*
2. *Sunflowers (oil varieties)*	*May 1-25*
3. *Grain Sorghums (early maturing)*	*May 15-June 10*
4. *Soybeans*	*May 1-July 1*
5. *Millet (grain, i.e., Japanese)*	*May 1-June 20*
6. *Spring barley*	*Soon as possible in Spring- by May 15 in S. Mich., June 1 in N. Mich.*
7. *Buckwheat*	*June-early July*
8. *Forage sorghums and Sudan grass hybrids (early maturing)*	*May 15-June 1*

Considerations for Design

VEGETATIVE COVER ESTABLISHMENT

Prior Herbicide Use:

Type:_____ Year:____
Type:_____ Year:____
Type:_____ Year:____

Note: Carryover herbicide damage to a new vegetative seeding in the food plot is possible. Note: soil pH differences may occur in a field and increase the amount of activity in herbicide carryover compared to other soils in the field area.

Site Preparation Recommendations:

_____
_____
_____
_____
_____
_____
_____
_____

Note: If heavy sods such as quackgrass are present, a good seedbed preparation method on level sites is to summer fallow (till) to eliminate weed competition.

Herbicide Recommendations:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Note: Chemicals must be federally, state, and locally registered and applied according to label directions.

Specifications

1. Place food plots on the least erodible acres and where drifting snow will not conceal the plot.

2. Residue management using mulch tillage or no-till should be used whenever possible to encourage cover and erosion control.

3. Soil loss should be calculated on the site if it is sloping and annual tilling and cropping will exceed soil loss tolerance or limits.

4. Food plots should be at least 1/4 acre in size with any single plot not to exceed five acres. On Conservation Reserve Program (CRP) fields, total acreage in food plots will not exceed 20 percent of total CRP acres on a farm. On plots larger than 2 acres, it is recommended that more than one food be planted in alternating strips.

5. Plants or residues on the plots will not be mechanically harvested or grazed by domestic livestock.

6. Plants must remain standing over winter until April 1; however, upright plants with food remaining could be left through the second year to supply important forbs and weeds for pheasants and songbirds. Alternating strips of first and second year food plots can greatly increase food diversity for wildlife species.

7. If the plots are discontinued or relocated, the old plots will be re-established to permanent vegetation matching the rest of the field as specified in the CRP contract.

8. Noxious weeds will be controlled.

9. Locate food plots 100 feet from trees 15 feet tall or taller to minimize predation from hawks and owls.

Equipment Considerations

When using older style corn planters with shoe type runners for seed placement and seed plates for specific seed sizes/types, consider the following to ensure successful food plot plantings:

1. Older planters require a specific seed type and size to function properly; i.e., get the right seed rate and spacing without cracking the seed. Check your planter manual or plates to see what seed type and size is required. For example, corn is sold as small, medium, or large flats/rounds or as plateless. Often in older planters, a large flat kernel will break or not plant uniformly if a small round plate is used. This can result in a poor stand. Seed dealers can help you select the right seed if you know the planter make, model, and plate type you are planning to use.

2. Uniform depth at planting in a level, weed-free seedbed will improve your success with a wildlife food plot. On older planters, seed depth is set by adjusting the press wheels used to close the seed furrow. Seed depth is impossible to maintain if the seedbed is lumpy, uneven, trashy or cloddy. *A firm, level seedbed is a must to get uniform, even emergence.*

Fertilizer Considerations

On small plots, fertilizer can be broadcast from a bulk fertilizer spreader rented from the supplier or with a three-point, rear-mounted clover seed/fertilizer spreader. A representative soil test should be taken from the field in the fall. If lime is needed, it should be applied as soon as the results are returned. Follow the advice of the local MSU Extension Agent and apply the fertilizer prior to seedbed secondary tillage. Or, if a soil test is not available, spring apply 500 lb. 12-12-12 per acre, or the equivalent, ahead of sunflowers, grain sorghum, millet, barley or forage sorghum. For corn, a fertilizer blend of 100 lb. of Urea (46-0-0) mixed with 400 lb. of 12-12-12 per acre, or the equivalent, can be broadcast ahead of secondary tillage to limit nitrogen loss. *Caution: Urea is subject to loss if surface applied on a recently limed field.* Liming can also release tied-up chemicals such as atrazine on low pH soils and injure new seedlings where atrazine was used ahead of soybeans, alfalfa or clovers. In this situation, select sorghum, corn or grain sorghum as they are resistant to atrazine carryover.

Other Considerations

A number of effects to environmental conditions will occur on fields where a wildlife food plot is established. A consideration of these effects will allow for incorporation of companion planning elements to achieve an ecosystem-wide conservation plan for the area in which the wildlife food plot is established. Effects to be considered include: sheet and rill erosion (RUSLE), wind erosion (WEQ), ephemeral gully (tons/ac/yr.), increased plant

productivity and diversity, improved winter food requirements, increased wildlife habitat suitability, more cover/shelter, greater wildlife diversity, and improved human social relations in rural areas.

Natural Resource area(s) expected to be addressed by the use/application of this conservation sheet:
[x] Soil, [ ] Water, [ ] Air, [x] Plants,
[x] Animals, [x] Human Socio-economics.

For More Information

Additional information about Wildlife Food Plots may be obtained from the World Wide Web (http: //www.mi.nrcs.usda.gov) and the publication "Managing Michigan's Wildlife: A Landowner's Guide."

This Conservation Sheet

Prepared By:
Jerry Grigar, Jr: State Agronomist, USDA-NRCS, MI,
Jay Wickerham, *Mike Parker*, Wildlife Biologist,
Timberland R.C.&D. D, *Michigan's Grand Watershed Team*

Technical Review: *Jerry Lemunyon:* Nutrient and Pest Management Specialist, South Central Region USDA-NRCS, *Lynn Sampson:* State Biologist, USDA-NRCS, MI